

What we claim is:

1) A composition for treatment of bacterial infections of the digestive tract, comprising an effective amount of at least one lytic enzyme produced by said bacteria being infected with a bacteriophage specific for said bacteria, and

5 a carrier for delivering said at least one lytic enzyme to the digestive tract.

2) The composition according to claim 1, wherein said bacteria to be treated is selected from the group consisting of *Listeria*, *Salmonella*, *E. coli*, *Campylobacter*, and combinations thereof..

3) The composition according to claim 1, wherein said carrier for delivering said at least one lytic enzyme to the digestive tract is selected from the group consisting of suppository enemas, syrups, or enteric coated pills.

4) The composition according to claim 1, wherein said composition further comprises a buffer that maintains pH of the composition at a range between about 4.0 and 9.0.

5) The composition according to claim 4, wherein the buffer maintains the pH of the composition at the range between 5.5 and 7.5.

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6) The composition according to claim 4, wherein said buffer comprises a reducing reagent.

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- 7) The composition according to claim 6, wherein said reducing reagent is dithiothreitol.
- 8) The composition according to claim 4, wherein said buffer comprises a metal chelating reagent.
- 9) The composition according to claim 8, wherein said metal chelating reagent is ethylenediaminetetraacetic disodium salt.
- 10) The composition according to claim 4, wherein said buffer is a citrate-phosphate buffer.
- 11) The composition according to claim 1, further comprising a bactericidal or bacteriostatic agent as a preservative.
- 12) The composition according to claim 1, wherein said at least one lytic enzyme is lyophilized.
- 13). The composition according claim 1, wherein said at least one lytic enzyme is present in a concentration of about 100 to about 100,000 active enzyme units per milliliter of fluid in the wet environment of the digestive tract
- 14). The composition according to claim 13, wherein said at least one lytic enzyme is present in a concentration of about 100 to about 10,000 active enzyme units per milliliter of fluid in the wet environment of the digestive tract.

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